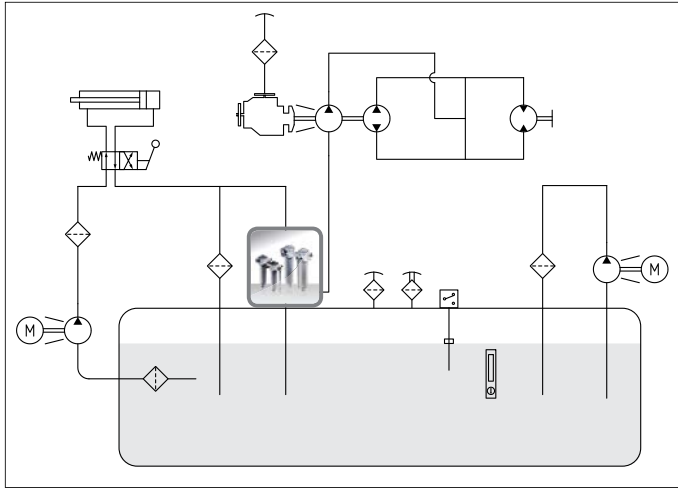


# KTS



**RETURN AND SUCTION FILTER FOR HYDROSTATIC TRANSMISSION**





## KTS

### TECHNICAL DATA

Max. working pressure: 1 MPa (10 bar)

Max. test pressure: 1,5 MPa (15 bar)

Bursting pressure: 3 MPa (30 bar)

Fatigue test:  $0 \div 1$  MPa (10 bar) / 300.000 cycles

Bypass valve: return  $\Delta p$  250 kPa (2,5 bar)  $\pm$  10%

Filter elements collapse pressures:  
standard:  $\Delta p$  1 MPa (10 bar)

Working temperature:  $-25 \div +110^{\circ}\text{C}$

### MATERIALS

Head: aluminium alloy

Bowl: steel

Seals: standard NBR  
on request FKM

### COMPATIBILITY (ISO 2943:1999)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4).

For fluids different than the above mentioned,  
please contact our Sales Department.

All tests performed according  
to the following standards:

ISO 2941: Element collapse resistance test

ISO 2942: Production integrity test

ISO 2943: Fluids compatibility

ISO 3723: End load test method

ISO 3724: Flow fatigue resistance method

ISO 3968: Pressure drop versus flow rate

ISO 16889: Multipass test.

For further information contact our Technical Dept.

The **KTS** filters are designed to work in hydraulic systems combined with hydrostatic transmission, when the return flow is higher than the flow of the boost pump in any operating condition.

The oil from the return line of the system is filtered from the inside to the outside of the filter element and goes to the suction of the boost pump with a 50 kPa (0,5 bar) pressurization. The exceeding flow rate goes into the reservoir.

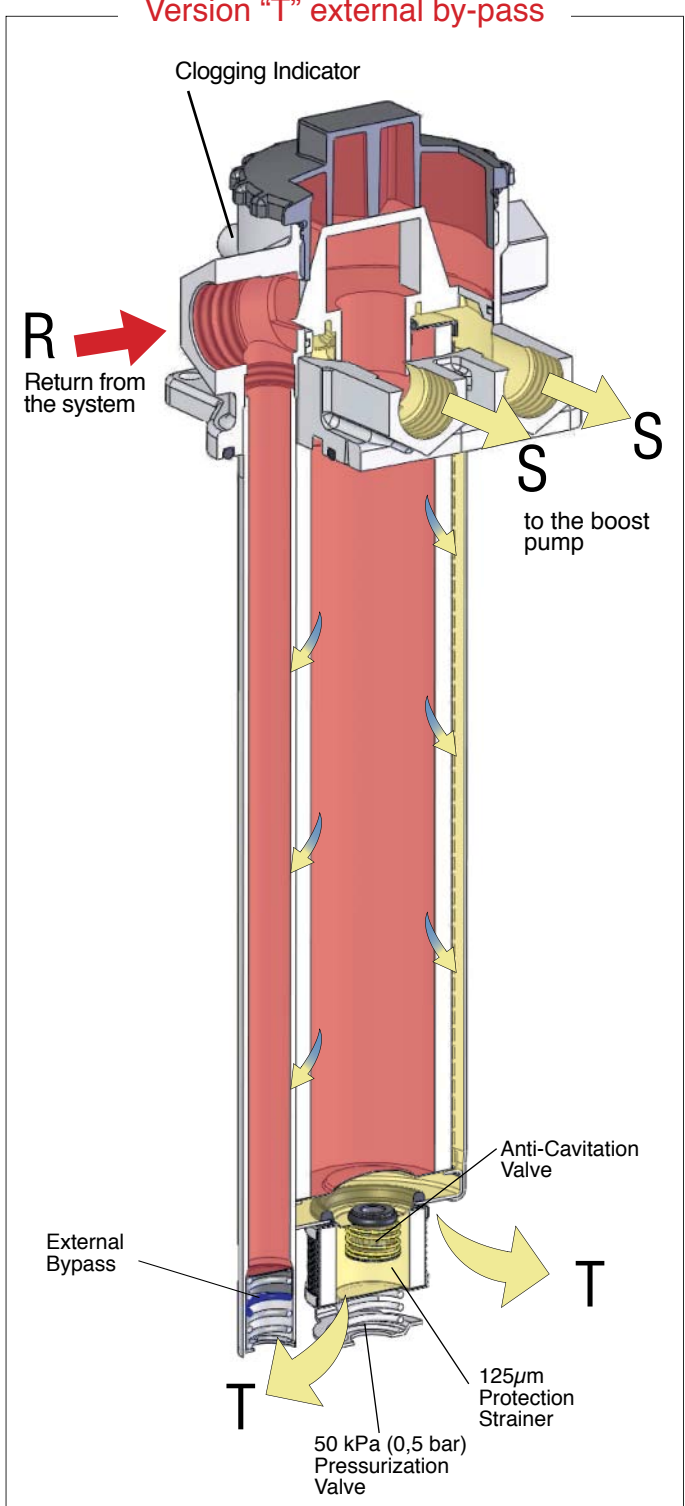
A flow rate 50% higher than the flow required by the boost pump is recommended in normal operating conditions.

- Two versions are available:
- with internal bypass system.
  - with external bypass valve

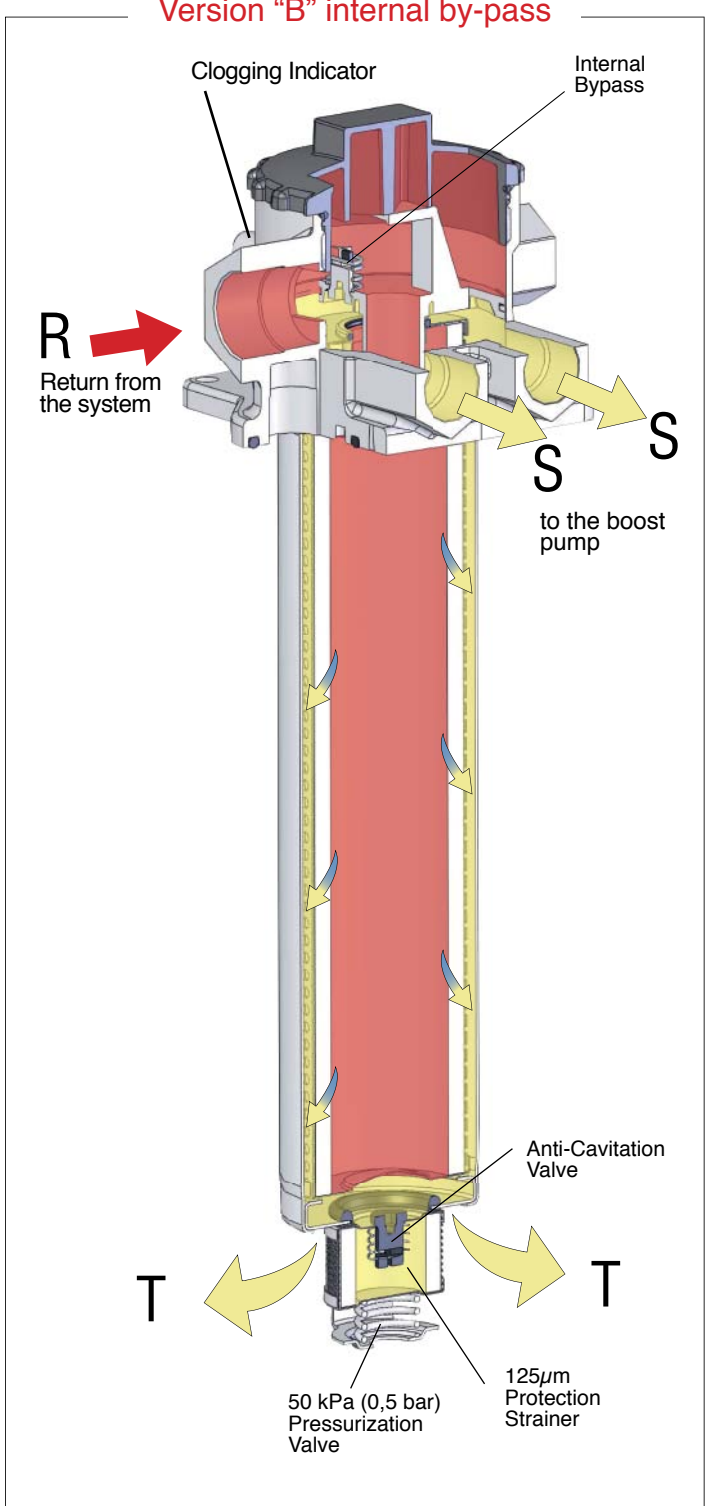
**ADVANTAGES**

- One filter for two functions: filtering the oil returning from the hydraulic system and feeding the boost pump with cleanest oil
- Pressurization allows absolute filtration on the suction of the boost pump
- No cavitation risk
- Filter element working from inside to outside allows retained contamination to be completely removed when replacing the element

**Version "T" external by-pass**

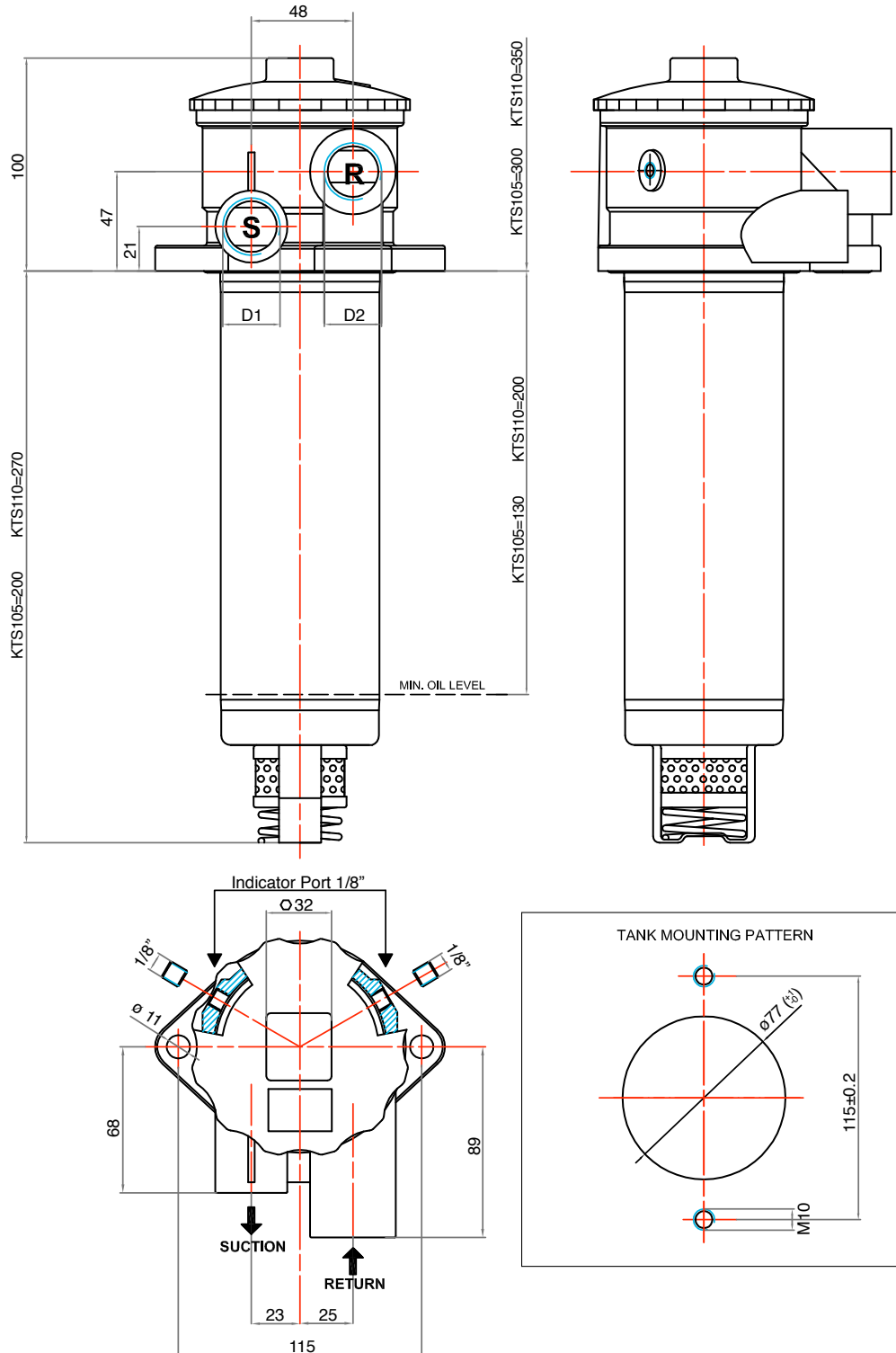
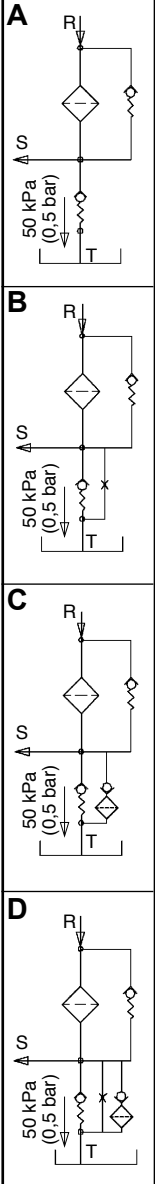


**Version "B" internal by-pass**



**DIMENSIONAL LAYOUT**

(mm)

**KTS 1B****Working Scheme**

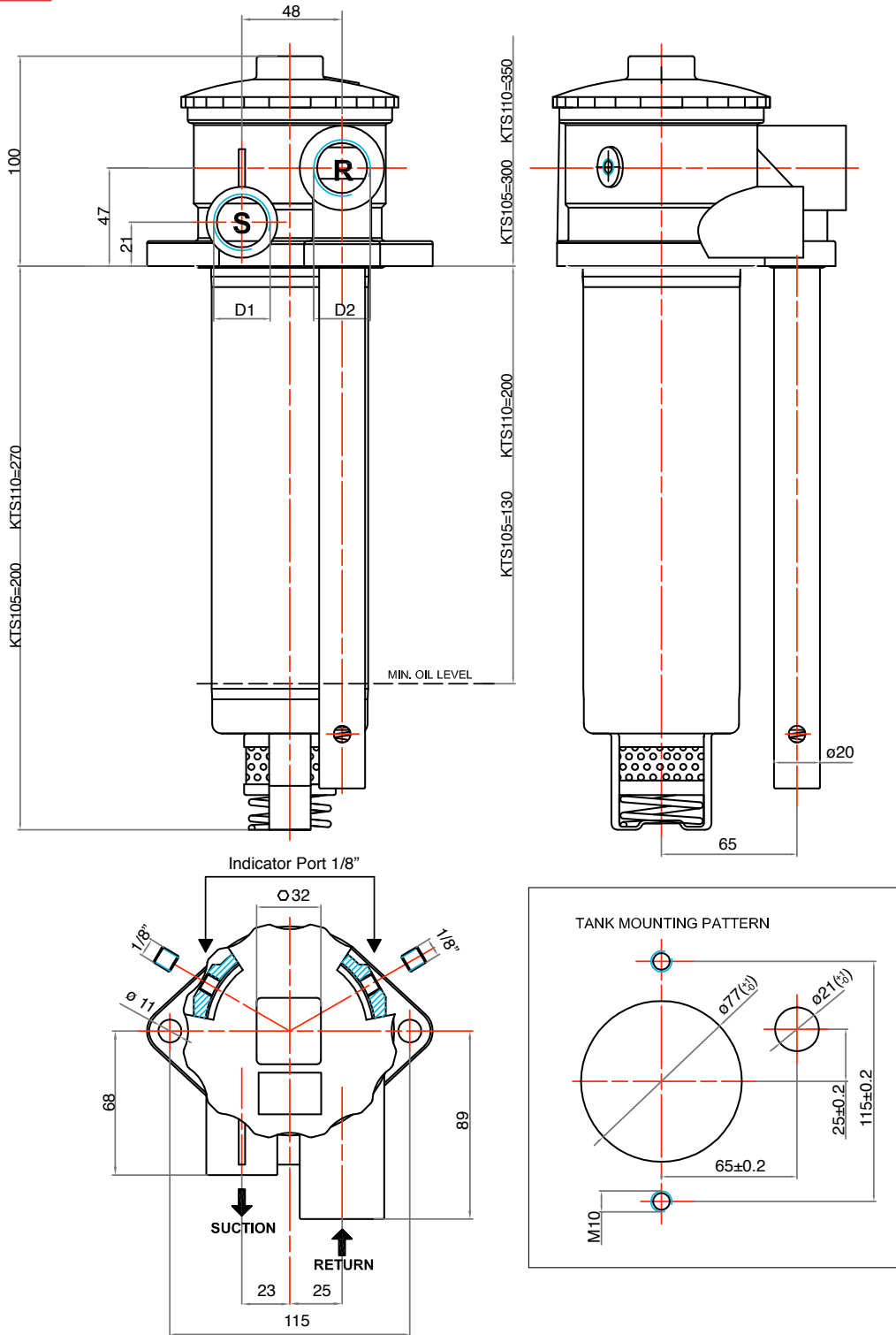
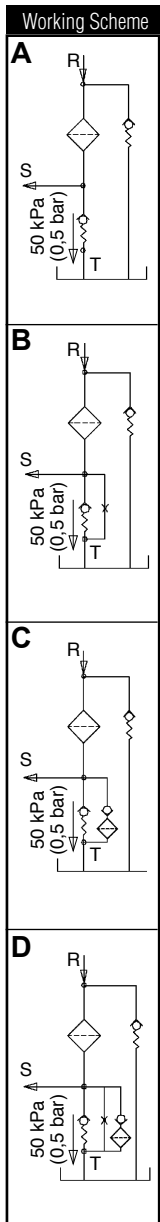
The reference fluid has a kinematic viscosity of 30 cSt and a density of 0,86 Kg/dm<sup>3</sup>.  
For different oil viscosity please contact our Sales Department for further information.

Complete Filter Code	Spare Filter Element Code	Nominal Flow Rate (l/min)	Port Return	Port Suction	Filter media	Dirt Holding Capacity ISO MTD (g)	Seals Material	Bypass Setting kPa(bar)	Bypass Version	Working Scheme	Indicator	Weight (Kg)
KTS105 FD 1 B B4 05 DX	CKT105 FD 1	50	3/4" BSP	3/4" BSP	Fiber 12 μm <sub>(c)</sub> β>1.000	16,8	NBR	250(2,5)	B	D	Plugged port	1,70
KTS110 CD 1 B ND 30 AX	CKT110 CD 1	85	1" NPT	3/4" NPT	Paper 10 μm β> 2	Area 2.200 cm <sup>2</sup>	NBR	250(2,5)	B	A	Press. gauge (30)	1,95
KTS110 CD 1 B B4 P6 CX	CKT110 CD 1	85	3/4" BSP	3/4" BSP	Paper 10 μm β> 2	Area 2.200 cm <sup>2</sup>	NBR	250(2,5)	B	C	Press. switch (P6)	2,05
KTS110 FD 1 B BD 30 CX	CKT110 FD 1	75	1" BSP	3/4" BSP	Fiber 12 μm <sub>(c)</sub> β>1.000	24,1	NBR	250(2,5)	B	C	Press. gauge (30)	1,95
KTS110 FS 1 B BD P6 CX	CKT110 FS 1	80	1" BSP	3/4" BSP	Fiber 16 μm <sub>(c)</sub> β>1.000	31,0	NBR	250(2,5)	B	C	Press. switch (P6)	2,05
KTS110 FS 1 B BD P6 DX	CKT110 FS 1	80	1" BSP	3/4" BSP	Fiber 16 μm <sub>(c)</sub> β>1.000	31,0	NBR	250(2,5)	B	D	Press. switch (P6)	2,05
KTS110 FV 1 B BD 05 DX	CKT110 FV 1	83	1" BSP	3/4" BSP	Fiber 21 μm <sub>(c)</sub> β>1.000	37,9	NBR	250(2,5)	B	D	Plugged port	1,90

**DIMENSIONAL LAYOUT**

(mm)

**KTS 1T**



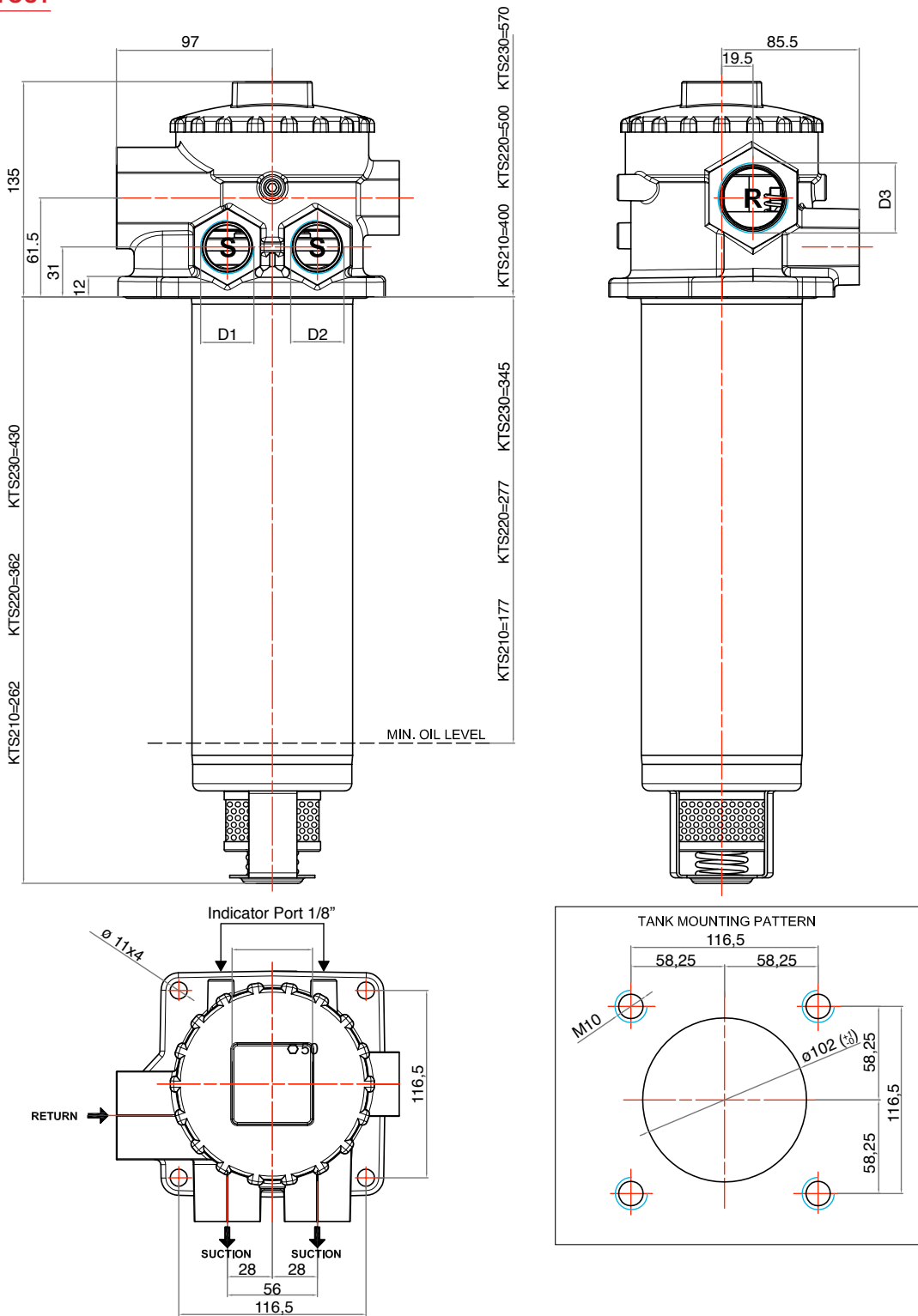
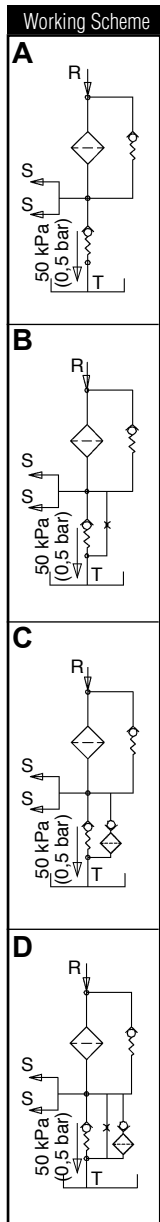
The reference fluid has a kinematic viscosity of 30 cSt and a density of 0,86 Kg/dm<sup>3</sup>.  
For different oil viscosity please contact our Sales Department for further information.

Complete Filter Code	Spare Filter Element Code	Nominal Flow Rate (l/min)	Port Return	Port Suction	Filter media	Dirt Holding Capacity ISO MTD (g)	Seals Material	Bypass Setting kPa(bar)	Bypass Version	Working Scheme	Indicator	Weight (Kg)
KTS105 FD 1 T B4 05 DX	CKT105 FD 1	50	3/4" BSP	3/4" BSP	Fiber 12 µm(α) β>1.000	16,8	NBR	250(2,5)	T	D	Plugged port	1,90
KTS110 FS 1 T BD 05 AX	CKT110 FS 1	80	1" BSP	3/4" BSP	Fiber 16 µm(α) β>1.000	31,0	NBR	250(2,5)	T	A	Plugged port	2,10
KTS110 FS 1 T BD 05 BX	CKT110 FS 1	80	1" BSP	3/4" BSP	Fiber 16 µm(α) β>1.000	31,0	NBR	250(2,5)	T	B	Plugged port	2,10
KTS110 FS 1 T BD P6 CX	CKT110 FS 1	80	1" BSP	3/4" BSP	Fiber 16 µm(α) β>1.000	31,0	NBR	250(2,5)	T	C	Press. switch(P6)	2,25

**DIMENSIONAL LAYOUT**

(mm)

**KTS 2B**



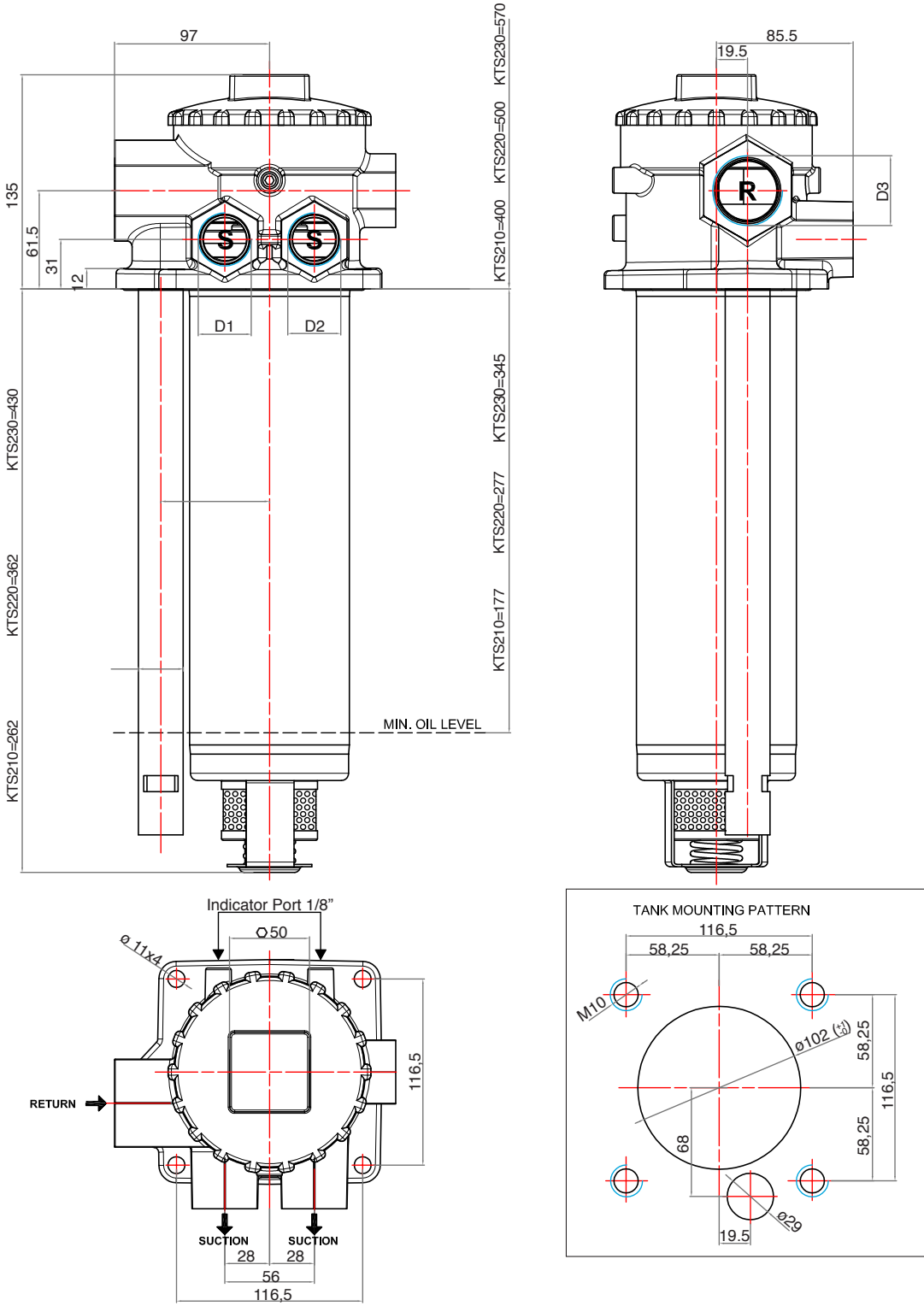
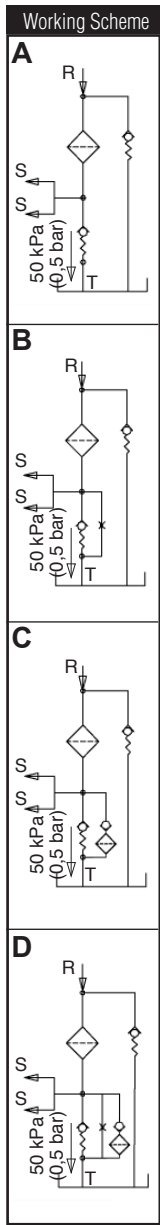
The reference fluid has a kinematic viscosity of 30 cSt and a density of 0,86 Kg/dm<sup>3</sup>.  
 For different oil viscosity please contact our Sales Department for further information.

Complete Filter Code	Spare Filter Element Code	Nominal Flow Rate (l/min)	Port Return	Port Suction	Filter media	Dirt Holding Capacity ISO MTD (g)	Seals Material	Bypass Setting kPa(bar)	Bypass Version	Working Scheme	Indicator	Weight (Kg)
KTS220 CD 1 B BE 05 CX	CKT220 CD 1	230	1"1/4 BSP	2 x 1" BSP	Paper 10 μm β > 2	Area 4.400 cm <sup>2</sup>	NBR	250(2,5)	B	C	Plugged port	4,10
KTS220 CD 1 B BE 30 AX	CKT220 CD 1	230	1"1/4 BSP	2 x 1" BSP	Paper 10 μm β > 2	Area 4.400 cm <sup>2</sup>	NBR	250(2,5)	B	A	Press. Gauge (30)	4,15
KTS220 FS 1 B BE P6 CX	CKT220 FS 1	200	1"1/4 BSP	2 x 1" BSP	Fiber 16 μm <sub>(c)</sub> β > 1.000	73,0	NBR	250(2,5)	B	C	Press. switch (P6)	4,25

# DIMENSIONAL LAYOUT

(mm)

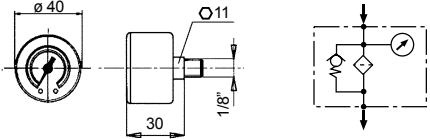
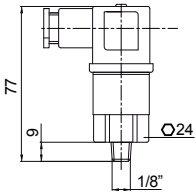
## KTS 2T



The reference fluid has a kinematic viscosity of 30 cSt and a density of 0,86 Kg/dm<sup>3</sup>.  
For different oil viscosity please contact our Sales Department for further information.

Complete Filter Code	Spare Filter Element Code	Nominal Flow Rate (l/min)	Port Return	Port Suction	Filter media	Dirt Holding Capacity ISO MTD (g)	Seals Material	Bypass Setting kPa(bar)	Bypass Version	Working Scheme	Indicator	Weight (Kg)
KTS230 FS 1 T BE 05 CX	CKT210 FS 1	180	1"1/4 BSP	2x1" BSP	Fiber 16 μm <sub>(e)</sub> β>1.000	53,0	NBR	250(2,5)	T	C	Plugged port	340
KTS230 FS 1 T BE 05 DX	CKT210 FS 1	180	1"1/4 BSP	2x1" BSP	Fiber 16 μm <sub>(e)</sub> β>1.000	53,0	NBR	250(2,5)	T	D	Plugged port	340
KTS210 FS 1 T BE 05 CX	CKT220 FS 1	200	1"1/4 BSP	2x1" BSP	Fiber 16 μm <sub>(e)</sub> β>1.000	73,0	NBR	250(2,5)	T	C	Plugged port	475
KTS210 FS 1 T BE 05 DX	CKT220 FS 1	200	1"1/4 BSP	2x1" BSP	Fiber 16 μm <sub>(e)</sub> β>1.000	73,0	NBR	250(2,5)	T	D	Plugged port	460
KTS220 FS 1 T BE P6 CX	CKT230 FS 1	250	1"1/4 BSP	2x1" BSP	Fiber 16 μm <sub>(e)</sub> β>1.000	90,1	NBR	250(2,5)	T	C	Press. switch (P6)	590
KTS220 FS 1 T BE 05 DX	CKT230 FS 1	250	1"1/4 BSP	2x1" BSP	Fiber 16 μm <sub>(e)</sub> β>1.000	90,1	NBR	250(2,5)	T	D	Plugged port	590

**CLOGGING INDICATORS**

NBR	FKM	Pressure gauge	
30	-	Scale 0 ÷ 600 kPa (6 bar)	
P6	-	Setting 200 kPa (2 bar)	
SPDT, C.C. 30V: > max resistive or inductive load 3A - 1A respectively C.A. 125 or 250V: > max resistive or inductive load 3A - 0,5A respectively Protection IP65 - Connector DIN 43650			ATEX 3 GD EEx e T6 